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June 27.

REV. J. H. TODD, D. D., Vice-President, in the Chair.

H. J. Monck Mason, Esq., LL.D., read an account of a visit which he had paid to the Tomb of the Volumnii at Perugia.

Mr. Mason then presented a gold fibula found in Ireland, as a contribution to the Museum of Antiquities, now in process of formation by the Academy.

The thanks of the Academy were voted to Mr. Mason for the donation.

A paper was read by Dr. Macartney "on the minute Structure of the Brain in the Chimpanzee and the human Idiot, compared with that of the perfect Brain of Man, with some reflections on the Cerebral Functions."

The author commenced by stating, that he had discovered the brain of all animals to be composed of a plexiform arrangement of white (or, as he termed them, *sentient*) filaments, the most delicate of which he found to pervade all the coloured substances of the brain. He attributed the higher sensorial powers of the cerebral organ to the disposition and intercommunication of these filaments, more especially where they exist in the coloured substances. The mode he employs for rendering the finer filaments evident is to moisten the different substances during the dissection with a solution of alum in water, which, causing a slight coagulation, makes the filaments opaque and visible. The author accounted for the fact that the existence of the most delicate plexuses had hitherto escaped observation, from the circumstance that other anatomists had not used any fluid to coagulate them. He considers the shape and magnitude of the different parts of the brain as merely subservient to the proper arrangement and number of the plexuses of the sentient substance.

The principal object of the paper was to point out the first gradations from the perfect structure of the brain in man, and for this purpose the author related the dissection of the brain of the chimpanzee (*simia troglodytes*, Lin.) and of two human idiots, from which he was led to conclude that the primary deviations in the anatomy of the brain were to be found in the *essential structure* of the *locus niger*, of the *corpus fimbriatum*, and of the *corpora olivaria*,—in the *existence* of the *white striæ* in the fourth ventricle, of the *corpora canalicantia*, and of calcareous granules in the *pineal gland*,—in the degree of intermixture of the *white filaments* of the *arbor vitæ*, the distinction of the *anterior crura* of the *fornix*, and lastly the *decussations* of the *pyramids*. By the dissections it was evident that the brain of the chimpanzee possessed a superior structure to that of the natural human idiot.

As the author had previously ascertained that all the plexuses in the brain are conjoined, and all the cerebral and spinal nerves are incorporated with the parts from which they are said to arise, he was led to infer that the functions of the brain are not confined to particular parts of the surface, but that all the parts exercise a mutual influence on each other, that its powers and operation are systematic and harmonious, instead of the effect of different parts of the brain acting independently and often in opposition to each other. He stated a number of facts contradicting the opinion of the cerebellum being designed to produce the sexual instinct, as taught by Gall and his followers. He ascribed the origin of all instincts to the organs to the operations of which the instincts are subservient. He argued that if instinctive impulses were to originate in the brain, they would interfere with all its higher functions. The author further considered the perfect continuity and incorporation of the nerves with central parts of the system, as sufficient to account for the functions of sensation and voluntary motion, without the interposition of nervous fluid.

Dr. Macartney exhibited a drawing of the base of the brain of an idiot, in which there was a singular deficiency of the cerebellum; and also a cast of the brain of the chimpanzee, and one of the human brain. These two, making allowance for the size, almost perfectly agreed with regard to external appearances.

J. Huband Smith, Esq., by command of His Excellency the Lord Lieutenant, presented to the Academy an ancient gold semilunar ornament of considerable value, found in the county of Roscommon.

The thanks of the Academy were voted to His Excellency for this donation.

A considerable number of ancient bronze articles, consisting of portions of chain armour, a spear head, a lance blade, with some coins, found near Headfort, County Galway, were presented to the Museum on the part of Richard J. Mansergh St. George, Esq.

Mr. St. George received the thanks of the Academy.

The collection of Antiquities of the late Dean of St. Patrick's was presented to the Academy in the name of the Subscribers.

RESOLVED,—That the List of Subscribers be printed as an Appendix to the Proceedings.*

* See Appendix, No. I.